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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,793	09/12/2003	Chi-An Kao	TS01-1037	8353

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EXAMINER	
NGUYEN, KHIEM D	
ART UNIT	**PAPER NUMBER**
2823	
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01/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,793	KAO ET AL.	
	Examiner	Art Unit	
	Khiem D. Nguyen	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-14* is/are allowed.

6)☒ Claim(s) *8-11 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Applicants' Arguments and Amendment

1. Applicants' arguments, see page 3 in the response, filed on December 12th, 2007, with respect to the final rejection(s) of claim(s) 8-11 and 15-17 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the finality of that action has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sahin et al. (U.S. Pub. 2003/0220708).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 8-11 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Sahin et al. (U.S. Patent 2003/0220708).

In re claim 8, **Sahin** discloses a system for creation of an opening of controllable format through a layer of insulation material, comprising:

means **102** for creating an opening **710a, 710b** through a layer of etch resist material **708** provided over the surface of a layer of insulating material **704/706** having been deposited over the surface of a substrate **702** (see page 11, paragraphs [0150]-[0152] and FIGS. 7A-C);

means for measuring an obtained critical dimension measurement of the opening **710a, 710b** created through the layer of etch resist material **708** (see page 16, paragraph [0207] and step 803 in FIG. 8A(1));

means, including a feedback mechanism (see page 12, paragraph [0166]), for assuring that the obtained critical dimension measurement of the opening created through the layer of etch resist material **708** is within design specification (see page 16, paragraph [0210] and step 809 in FIG. 8A(1)), the feedback mechanism communicating with the means for creating an opening through a layer or etch resist material **708** to control the critical dimension (CD) measurement of the opening **710a, 710b** (see page 6, paragraph [0211] and steps **807** and **810** of FIG. 8A(1));

means for creating an opening **710a, 710b** through the layer of insulation material **704/706**, whereby a diameter of the opening **710a, 710b** through the layer of insulation material **704/706** is dependent on a diameter of the opening **710a, 710b** created through the layer of etch resist material **708** (see page 17, paragraphs [0214]-0215); and

means, including a feedback mechanism, for assuring that the opening **710a, 710b** created through the layer of insulation material **704/706** is within design specification (see page 17, paragraphs [0216]-[0219]).

In re claim 9, as applied to claim 8 above, **Sahin** discloses all claimed limitations including the limitation wherein means, including a feedback mechanism (see page 12, paragraph [0166]), for assuring that an obtained critical dimension measurement of the opening **710a, 710b** created through the layer of etch resist material **708** is within design specification comprising (see page 16, paragraph [0210] and step **809** in FIG. 8A(1)):

means for linking to a software supervisory function, thereby including data transmission functions, means for linking to a software function equally being linked to a software supervisory function, thereby including data transmission functions; means for data manipulating capabilities, thereby including manipulating interdependent data ; means for interfacing with semiconductor equipment, thereby including equipment functioning in a supporting role to the semiconductor equipment; and means for creating instructions for the semiconductor equipment, thereby including equipment functioning in a supporting role to the semiconductor equipment (see page 6, paragraph [0094]).

In re claim 10, as applied to claim 8 above, **Sahin** discloses all claimed limitations including the limitation wherein means for assuring that the opening **710a 710b** created through the layer of insulation material **704/706** is within design specification comprising: means for linking to a software supervisory function , thereby including data transmission functions, means for linking to a software function equally being linked to a software supervisory function, thereby including data transmission functions; means for data manipulating capabilities, thereby including manipulating interdependent data; means for interfacing with semiconductor equipment, thereby including equipment functioning in a supporting role to the semiconductor equipment; and means for creating instructions for the semiconductor equipment, thereby including equipment functioning in a supporting role to the semiconductor equipment (see page 6, paragraph [0094]).

In re claim 11, as applied to claim 8 above, **Sahin** discloses all claimed limitations including the limitation wherein the system further comprising means for creating an opening **710a, 710b** having non-linear sidewalls through a layer of insulation material by

applying a high-polymer based etch to the surface of the layer of insulation material **704/706** (see page 11, paragraph [0158]).

In re claim 15, **Sahin** discloses a system for creation of an opening of controllable format through a layer of insulation material, comprising:

means **102** for creating an opening **710a, 710b** through a layer of etch resist material **708** provided over the surface of a layer of insulating material **704/706** having been deposited over the surface of a substrate **702** ((page 11, paragraphs [0150]-[0152] and FIGS. 7A-C);

means, including a feedback mechanism (see page 12, paragraph [0166]), for obtaining a critical dimension measurement of the opening created through the layer of etch resist material **708** assuring that the critical dimension measurement (CD) is within design specification (see page 16, paragraph [0210] and step **809** in FIG. 8A(1)), the feedback mechanism communicating with the means for creating an opening 710a, 710b through a layer of etch resist material **708** to control the critical dimension measurement (CD) of the opening **710a,710b** (see page 6, paragraph [0211] and steps 807 and 810 of FIG. 8A(1));

means for creating an opening **710a, 710b** having non-linear sidewalls through the layer of insulation material **704/076** by applying a high-polymer based etch to the surface of the layer of insulation material **704/706** (see paragraph [0158]), whereby a diameter of opening having non-linear sidewalls is dependent on a diameter of the opening created through the layer of etch resist material **708** (see page 17, paragraphs [0214]-0215); and

means, including a feedback mechanism, for assuring that the opening **710a, 710b** created through the layer of insulation material **704/706** is within design specification (see page 17, paragraphs [0216]-[0219]).

In re claim 16, **Sahin** discloses a system for creation of an opening of controllable format through a layer of insulation material, comprising:

means, including a feedback mechanism (see page 12, paragraph [0166]), for creating an opening **710a, 710b** through a layer of etch resist material **708** provided over the surface of a layer of insulating material **704/706** having been deposited over the surface of a substrate **702**, such that the opening **710a, 710b** has a critical dimension measurement (CD) that is within design specification (see page 16, paragraph [0210] and step 809 in FIG. 8A(1));

means for creating an opening **710a, 710b** through the layer of insulation material **704/706**, whereby a diameter of layer of insulation material **704/706** is dependent on a diameter of the opening **710a, 710b** created through the layer of etch resist material **708** (see page 17, paragraphs [0214]-0215); and

means, including a feedback mechanism, for assuring that the opening created through the layer of insulation material is within design specification (see page 17, paragraphs [0216]-[0219]).

In re claim 17, as applied to claim 16 above, **Sahin** discloses all claimed limitations including the limitation wherein the means, including a feedback mechanism, for creating an opening **710a, 710b** (see page 12, paragraph [0166]) include means for

making corrections to an original critical dimension measurement (CD) that is not within design specification (see page 17, paragraphs [0214]-[0215]).

Allowable Subject Matter

4. Claims 12-14 were previously allowed over prior art of record as indicated in the Office Paper mailed on March 08th, 2005.

Response to Applicants' Amendment and Arguments

5. Applicants' arguments with respect to claims 8-11 and 15-17 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem D. Nguyen whose telephone number is (571) 272-1865. The examiner can normally be reached on Monday-Friday (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K.N.
December 28, 2007

Brook Kebede

BROOK KEBEDE
PRIMARY EXAMINER